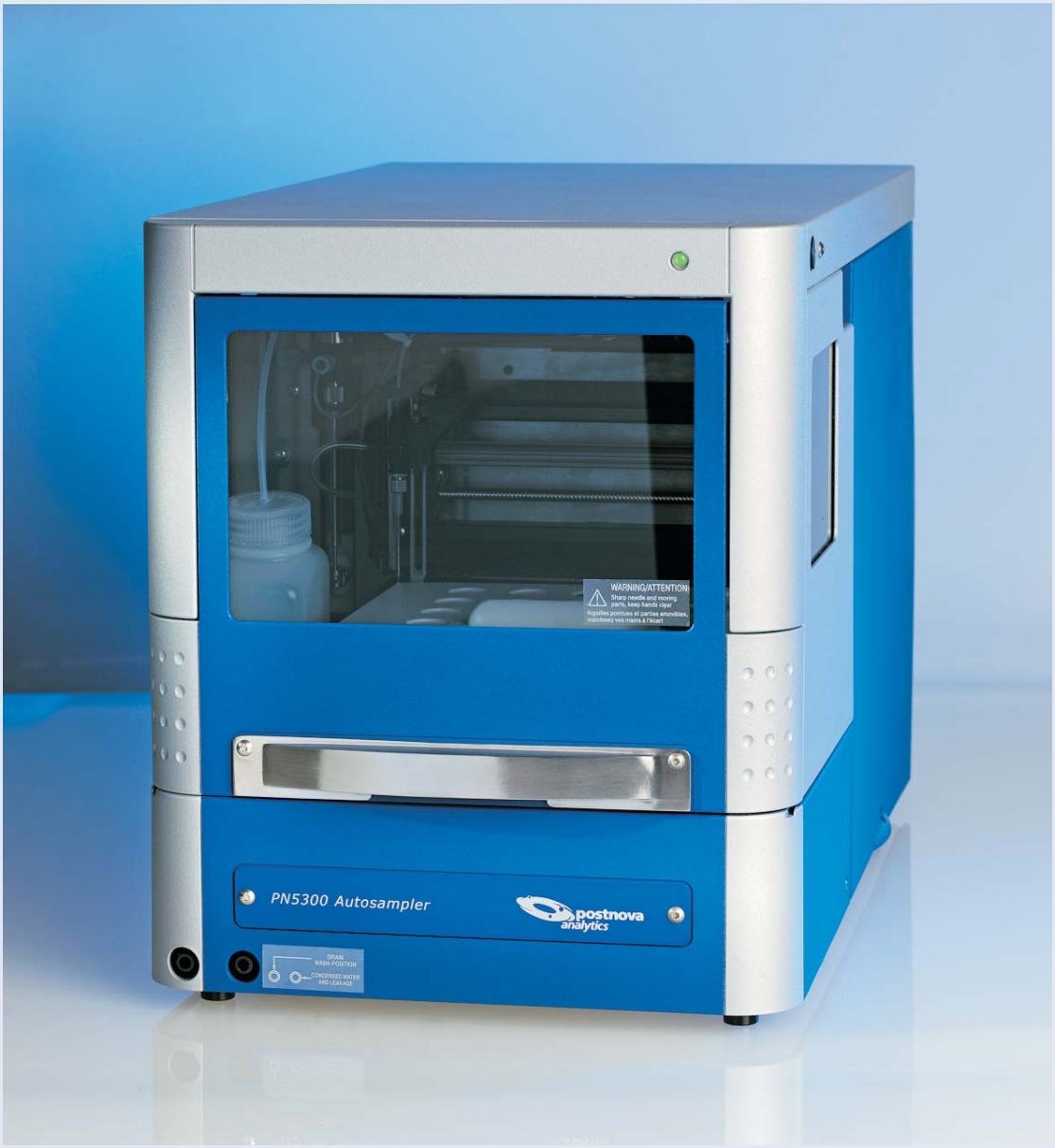
postnova analytics
advanced analytical products

PN5300 Series



Autosampler System for Field-Flow-Fractionation

Technical specifications are subject to change without further notice.

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Specifications

I - GENERAL

Environm. Temp.:	10-40°C
Humidity:	20-80% rel. Humidity
Dimensions:	300 x 575x360 mm
Weight:	21 kg
Power Requirements:	95-240 V, 50-60 Hz
Viscosity Range:	0.1 - 5 cP
Communication:	RS232C; option TCP/IP
Inputs/Outputs:	2 TTL in; 1 relay out

II - SAMPLING

Sample Capacity:
2 Micro Titer plates according to SBS standards; 96-well high/low and 384-well low formats, 48-vial or 12-vial trays; any combination of plates is allowed, except for 384 low left and 96 high right side; standard 1.5 mL chromatography vials with/without inserts, 10 mL prep vials and small Eppendorf tubes can be used. Maximum vial/plate height is 47 mm overall. Automatic missing vial or well plate detection via internal sensor.

Loop Volume:
1-5000 µL programmable, 10 mL loop optional.

Dispenser Syringe:
500 µL standard syringe, 2500 µL for prep option.

Injection Valve:
Electrical switching time < 100 ms

Piercing Precision Needle:
+/- 0.6 mm

Wash Solvent:
Integrated wash solvent bottle.

Wetted Parts:
SS316, PTFE, TEFZEL, VESPEL, Glass, Teflon, Peek; can vary with model metall-free etc.

Injection Cycle Time:
< 60 sec in all injection modes with injection volume < 100 µL including 300 µL wash.

III - ANALYTICAL PERFORMANCE

Injection Modes:
Full loop, partial loopfill and µL pickup mode, pressure-assisted sample aspiration system.

Reproducibility:
RSD < 0.3 % for full loop injections (at 1.0 cP)
RSD < 0.5 % for partial loopfill inject. (10 µL Vol.)
RSD < 1.0 % for µL pick-up injections (10 µL Vol.)

Memory Effect:
< 0.05 % with programmable needle wash

IV - OPTIONS

Sample Tray Cooling: Built-in Peltier cooling; Range 4°C up to ambient -3°C.

Sample Tray Cooling/Heating: Built-in Peltier cooling/heating; Range 4°-40°C.

Biocompatible Version: Inert Silco steel sample needle and biocompatible Peek valve.

Prep Kit: 2.5 mL syringe; prep. valve; 10 mL sample loop; LSV needle; 24 pcs of 10 mL vials 2 prep sample trays, injection volume 1 µL up to 19.999 µL in 1 µL increments.

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The New PN5300 Series

The PN5300 sample injector includes the latest state-of-the-art autosampler technology, such as a double needle with positive headspace pressure, extensive wash routines for minimal carry over and three injection modes including micro liter pick-up mode for zero sample loss, huge injection range and full biocompatibility.

Offering space for two deep well, shallow well or vial rack adapter plates, the PN5300 is idealy suited to be integrated with a wide range of different FFF systems. The newly designed Peltier cooling/heeting keeps samples stable in a closed environment for maximum reproducibility. The temp range from 4°C up to 40°C prevents degradation, evaporation or precipitation of sample during storage and processing with any FFF system.

The system allows the flexible use of 96 or 384 wells, deep or shallow, sealed or open. Of course "conventional" vial systems such as standard chromatography vials 1.5 mL, sealed or open and with or without micro insert, can be used as well. The system is also open to special vial formats such us small Eppendorf tubes and preparative vials with 10 mL volume.

The proven and reliable pressure assisted sample aspiration concept assures unrivalled injection precision and accuracy for a broad range of injection volumes and a large variety of samples.

No dilution, but removal of contaminants is the clear concept of the PN5300 when it comes to rinse/wash procedures to avoid any possible carry-over! Both, the special design of the needle wash station and the rapid wash solvent delivery ensures a very efficient removal of contaminants within a short time. Additionally the possibility to select an extra wash solvent helps to get rid of even the stickiest analyte.

Special features of the PN5300 Autosampler system
State-of-the-art autosampler system, fully compatible with the completely line of Postnova FFF hard- and software products. Complete integration of the autosampler system with FFF-Light Scattering systems (MALS / DLS) for fully automated measurements of up to 384 samples (well plates).
Free front accessible injection valve, needle, rinse port and sample trays for easy maintenance and cleaning procedures.

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